services at any time are a reflection of a vendor's knowledge of customer needs and desires.

A second redefinition is that the current concept of a product life cycle may become less precise and less meaningful as product markets become information markets. The core transformation is from a product development stage followed by a product launch stage and one or more sales campaigns with occasional product improvements when needed to meet sales and revenue objectives. As enabled by this invention, the initial development stage increasingly interpenetrates all other stages of the product life cycle, the operations of corporations, and the evolution of economic systems (i.e., capitalist economies).

As envisioned by this invention, as customers and vendor employees interact to produce continuous improvement, the marketplace may be e-engineered into an interactive development environment (i.e., research and development environment, or R&D environment) with a national or global scope. The opportunities for accelerated learning may transform:

- The ability of an individual corporation to satisfy the needs of its customers,
- If that company gains competitive advantages that produce additional market share, or other meaningful advantages, similar in-product communications may be adopted by competing companies, which may transform the industry or the marketplace,
- As the industry or marketplace evolves to interact with its customers, the fundamental efficiencies of those markets and those industries may increase.
- As the continuous improvement capabilities of particular industries in particular countries grow, the global market share of those industries and countries may transform the leading companies in those industries worldwide.

Because of the embedding of microprocessors and computing into products, some of the types of industries that may be affected include computers, software, electronics, communications, interactive entertainment, multimedia, transportation, energy, farm equipment, avionics, medical equipment, scientific instruments, etc Perceivable or measurable improvements may include customers receiving more of what they really want to buy for each dollar they spend, faster product evolution based on customer needs, increased market shares for companies that are more responsive to customer desires and more able to assist customers in achieving their goals, etc.

Thus, a technology may lead to organizational and market efficiencies that empirically improve the efficiency and effectiveness of capitalist markets. In Adam Smith's terms, the "invisible hand" of the market may be rendered "visible," accelerating the evolution of human welfare by providing greater benefits from free choice and personal freedom. In sum, the redefinitions intended may simultaneously be technological, operational (for products, organizations and economies) and political.

Today there are many approaches to competitiveness and the cost of failing to find a successful approach has mushroomed For example, some world-class corporations use new technologies to capture market share. Others use a constant launching and churning of new product models to attack their competitors' customer-vendor relationships.

This invention focuses on the competitive strategy of having companies work in a partnership with their customers to gain the greatest ability to concentrate their scarce resources on developing the products and markets that customers want most, and on serving customers in the ways that are most valuable to customers, so that these companies gain the largest increases in sales and profits. It suggests that the value of these customer-vendor relationships may be a central business advantage at this point in the emergence of a global information age, and this advantage may be explicitly captured by engaging in new types of product development partnerships that may be made possible by this invention.

Needs for this Invention

(Note: this invention's terminology is defined at the beginning of the Preferred Embodiment.)

Simply put, this invention helps vendors and customers by transforming their learning cycle: It compresses the time and steps between setting business objectives, creating effective products and services, and improving them continuously. It also alters their roles: Customers become partners in the improvement process along with vendors and distributors.

This invention's "Customer-Based Product Design Module" (CB-PD Module) generates numerous opportunities for improvements by integrating customers and employees into the design and delivery of products and services as a continuous process. The invention describes a specific new class of product feature that may be added to, or built into, many types of products and services. The CB-PD Module engages Customers in Development Interactions (DI) while products and services are being used. The customers and users provide direct, on-task understanding of their use of the products and services, and of their unfilled needs, to the product vendors, designers and developers Development Interactions (DI) will take place most often during actual uses of the product or service, which is when most unreported problems and dissatisfactions occur. The results of these Development Interactions (DI) clarify customer needs, improve products, and they may also help solve problems, control costs, and improve services and operations.

Because it automates this process and adds networking to many types of products and services, this invention may help change the cost, economics, methods and desirability of involving customers in the design and evolution of products and services. By automating this process, there are new opportunities to produce valuable customer-based information that may become low in cost and constantly available. This might transform the overall learning cycle, the very process by which products and services can be improved continuously in the future. In other words, if your customers and users are telling you directly what has value to them and what doesn't, this becomes a way to manage a business better, to select priorities more responsively, to budget scarce capital and human resources more accurately, to target the points where one's products and services make the most difference to customers, and to increase the company's revenues and profits faster than competitors.

With this CB-PD Module, because of the new customer-vendor partnerships and learning cycle it creates, the result is a different learning cycle based on new kinds of interactive feedback from customers. Over time, if one or more general purpose CB-PD Modules can be productized and modularized for rapid and affordable insertion into appropriate products and services, that will decrease its cost, accelerate the learning process for many companies, and expand management's ability to work directly with their customers to provide valuable new benefits faster than they are able to today.

From this invention's viewpoint, critical management decisions spring from the fact that vendors invest considerable money, employee time and effort to create and market their products and services. One of a vendor's most important questions is, "How can our currently available resources be leveraged to jump faster and farther toward our goals?" Potential opportunities exist at two levels. There are local decisions, such as how to design or improve a specific product